

**ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM**

**Animal Abstract**

**Element Code:** ARACD01033

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Coleonyx variegatus utahensis*

**COMMON NAME:** Utah Banded Gecko

**SYNONYMS:**

**FAMILY:** Eublepharidae: Eublepharinae

**AUTHOR, PLACE OF PUBLICATION:** *Coleonyx variegatus utahensis* Klauber, Trans. San Diego Soc. Nat. Hist. 10(11): 171, 1945.

**TYPE LOCALITY:** One mile north of St. George, Watercress Spring, Washington County, Utah (Klauber, 1945).

**TYPE SPECIMEN:** Holotype: University of Michigan Mus. Zoology 72140.

**TAXONOMIC UNIQUENESS:** *Coleonyx variegatus* is 1 of 6 species of the genus *Coleonyx* that occurs in North America. Subspecies *utahensis* is 1 of 5 in the species *C. variegatus* and 1 of 3 that occurs in Arizona. The other 2 subspecies in Arizona include *C. v. bogerti* (Tucson Banded Gecko), and *C. v. variegatus* (Desert Banded Gecko). Per NatureServe (2007), "Subspecies *utahensis* intergrades widely with subspecies *variegatus* (Tanner and Banta 1966) and hence is of questionable validity as a distinctive evolutionary lineage." Genetic studies may help in solving this question. Currently, Arizona Game and Fish (Nongame Branch) is tracking the subspecies *utahensis* separately from ssp. *variegatus*, thus the HDMS follows suit here in this abstract and the one for the ssp. *variegatus*.

In 1987, Kluge conducted a cladistic analysis of the family Gekkonidae, placing the genus *Coleonyx* in the family Eublepharidae (subfamily Eublepharinae), recognized as distinct from the Gekkonidae. Bartlett and Bartlett (1999), Grismer (2002), and Stebbins (2003) likewise placed *Coleonyx* in the family Eublepharidae, whereas Dixon (2000) retained *Coleonyx* in Gekkonidae. (NatureServe 2007).

**DESCRIPTION:** A medium-sized lizard with adults averaging between 5.0-6.0 in (12.7-15.3 cm) in total length; females measure about 2.8 in (7.0 cm) snout-vent length (SVL), and the smaller males measure about 2.5 in (6.3 cm) SVL; hatchlings measure about 1.5-2.0 in (3.8-5 cm) long. The skin is soft, somewhat translucent, and covered in granular scales (without tubercles); the ventral surface of the body is unpigmented. The coloration is a light tan background with dark brown to black crossbands or blotches and spots. The head is covered with red-brown spots on top, and a light-cream color line starting from under each eye passing just above the ear

opening and ending in a loop on the back of the neck. They have a pointed snout, protruding moveable eyelids, and large eyes with vertical (elliptical) pupils. The tail is usually plump and becomes constricted where it meets the body; if unregenerated, it is about as long as the body. The legs are small and the toes are slender with no pads or villi. Young usually have distinct crossbars that break up into reticulations as the animal ages. Males develop large hemipenal bulges and possess a pair of spurs at the base of their tails. According to Stebbins (2003), corresponding scales in females are usually enlarged and sometimes pitted but lack pores. (Behler and King 1979; Degenhardt et al. 1996; Stebbins 2003; Brennan and Holycross 2006).

**AIDS TO IDENTIFICATION:** When it comes to geckos, only Banded Geckos have eyelids and lack toepads. The species and subspecies of banded geckos are very similar and identifying them can be difficult. Individuals interested in locating these geckos need to pay close attention to location, and use the key to confirm the identification. With that said, *Coleonyx variegatus utahensis* (Utah Banded Gecko) closely resembles *C. v. variegatus* (Desert Banded Gecko), which is found to the south and west, but in *C. v. utahensis* the dark body bands are wider than the light spaces between, and usually lack light centers. The edges of the bands are highly irregular, often merged with dark spots in the interspaces (Stebbins 2003). In males, the pre-anal pores number 7 or less. Banded geckos from southern Nevada are intermediate between *C. v. utahensis* and *C. v. variegatus*, and often cannot be readily distinguished. (Stebbins 2003; Geckoweb.org 2007). Geckos observed on sidewalks and house walls of urban areas are Mediterranean Geckos (*Hemidactylus turcicus*), an introduced species that lacks movable eyelids, with white tubercles (warts) on the skin.

#### **ILLUSTRATIONS:**

Color photo (Arizona Wildlife Views Special Edition, p. 109)

Color photo (Brennan and Holycross 2006: p. 90)

Color photo (Suzanne L. Collins, 2001, in CNAH, <http://www.cnah.org/detail.asp?id=482>)

Color photo (Geckoweb 2007, <http://www.geckoweb.org/profile/coleonyx-variegatus-utahensis>)

Color photo (Troy Hibbitts, in kingsnake.com 1998,  
[http://kingsnake.com/gecko/c\\_v\\_utahensis.html](http://kingsnake.com/gecko/c_v_utahensis.html))

Color photo of pair with eggs (P. Schulze Niehoff, in Geckowork Gecko Forums,  
[http://www.geckoworld.net/forum/album\\_showpage.php?pic\\_id=381](http://www.geckoworld.net/forum/album_showpage.php?pic_id=381))

Color photo of species (Lynn Chamberlain, Utah Natural Resources, Division of Wildlife Resources, <http://dwrcdc.nr.utah.gov/rsgis2/Search/Display.asp?F1Nm=colevari>)

**TOTAL RANGE:** Extreme southwestern Utah, southern Nevada, and northwestern Arizona.

**RANGE WITHIN ARIZONA:** Northwestern portion of state in Mohave County.

#### **SPECIES BIOLOGY AND POPULATION TRENDS**

**BIOLOGY:** As with other subspecies of *Coleonyx variegatus*, ssp. *utahensis* is a nocturnal ground dweller active between April and October. Adults are usually active just after dark and remain so throughout the night. However, this gecko is found farther north than any other North American banded gecko species, into the cool, temperate climate, and thus is active during daylight hours more than other banded geckos (Geckoweb.org 2007). This subspecies spends winter months in hibernation, relying on the fat stored in their thick, fleshy tail to support them. When inactive, Utah banded geckos sometimes take shelter in desert tortoise burrows, or under rocks, debris, in crevices or underground. When stalking prey, *C. v. utahensis* waves its swollen tail like a prowling cat (Geckoweb.org 2007). Defensive tactics observed by *Coleonyx variegatus* include squeaking, ejecting viscous liquids, and limb extension (SDNHM, 2007). When threatened, banded geckos usually use specific behaviors that draw the predator's attention to the wiggling tail instead of the body. If caught by the tail, they will readily lose it; however, the tail is easily regenerated but can be costly physically for the geckos during the winter, since the tail holds their main fat reserve. Geckos are able to detect and identify potential snake predators by chemical means (Dial et al., 1989 in Degenhardt et al. 1996). Banded geckos are known to mark out discrete locations some distance away from their daytime retreats for defecation. The scent of chemicals in the feces may serve as a social "signpost" to other geckos, notifying them of the resident's occupancy. Lifespan in captivity for *C. v. bogerti* has been reported between 7 to 10 years (Geckos Unlimited 2001). (Brennan and Holycross, 2006; Geckoweb.org, 2007)

**REPRODUCTION:** The female lays 1 to 3 clutches (average 2) of 2 leathery-shelled eggs in the spring. For the species, females lay clutches from May to September, and may store sperm from early mating to produce clutches later in the year. Hatchlings emerge after about a 45 day (about 6 week) incubation period, measuring about 25-30 mm SVL, reaching adult size by the following spring. (Degenhardt, et al. 1996; Stebbins 2003).

**FOOD HABITS:** The species is an insectivore, consuming insects and spiders.

**HABITAT:** Rocky or sandy desert and semiarid locales. In Utah, it is found among creosote bush in rocky areas near streams or watercourses (Geckoweb.org 2007).

**ELEVATION:** For the species: up to 5000 feet (1524 m).

**PLANT COMMUNITY:** Mohave and Great Basin Desertscrub with creosote bush, and sagebrush.

**POPULATION TRENDS:** Unknown. NatureServe (2007), reports the global trend for the species as stable. They go on to say, the "Extent of occurrence, area of occupancy, and abundance probably are relatively stable from a range-wide perspective. Abundance and perhaps area of occupancy may be declining somewhat in the more populated portions of the range (e.g., California, parts of Arizona)."

**SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None  
**STATE STATUS:** None  
**OTHER STATUS:** Wildlife Species of Concern (Utah Division Wildlife Resources 2006)

**MANAGEMENT FACTORS:** Threats include urban development and habitat degradation by recreational activities and grazing (Geckoweb.org 2007).

**PROTECTIVE MEASURES TAKEN:** In Utah, The Utah Division of Wildlife Resources controls collection, importation or possession of species without a permit.

**SUGGESTED PROJECTS:** Genetic studies to determine if subspecies *utahensis* is distinct from *ssp. variegatus*.

**LAND MANAGEMENT/OWNERSHIP:**

**SOURCES OF FURTHER INFORMATION****REFERENCES:**

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## MAJOR KNOWLEDGEABLE INDIVIDUALS:

## ADDITIONAL INFORMATION:

Scientific name description: *Coleonyx* comes from the Greek *koleos*, meaning a sheath and *onych*, meaning nail or claw, while *variegatus* comes from the Latin *vario*, meaning variegated ([www.sdnhm.org](http://www.sdnhm.org)). The subspecies name *utahensis*, was named for the state Utah where this subspecies of banded gecko was first found.

Banded geckos are most often encountered on the roads at night. They utilize the heat of the roads to warm themselves before searching for food.

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